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REV. 12/99  
For A Small Entity

Docket No. GTX-001

Applicant : Marvin T. Ling  
For : METHOD AND APPARATUS FOR CONDUCTING  
ELECTRONIC COMMERCE TRANSACTIONS USING  
ELECTRONIC TOKENS

EXPRESS MAIL CERTIFICATION

"Express Mail" mailing label number EK742272468US.  
Date of Deposit April 21, 2000.

I hereby certify that this transmittal letter and the other papers and fees identified in this transmittal letter as being transmitted herewith are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and are addressed to the Hon. Assistant Commissioner for Patents, Washington, D.C. 20231.

  
\_\_\_\_\_  
Lily Jiang

Hon. Assistant Commissioner  
for Patents  
Washington, D.C. 20231

TRANSMITTAL LETTER FOR  
ORIGINAL PATENT APPLICATION

Sir:

Transmitted herewith for filing are the  
[X] specification; [X] claims; [X] abstract; [X] declaration;  
[X] power of attorney, for the above-identified patent  
application.

Also transmitted herewith are:

[X] 13 sheets of:

[ ] Formal drawings.

[X] Informal drawings. Formal drawings will be filed  
during the pendency of this application.

jc803 U.S. PRO  
04/21/00

jc555 U.S. PRO  
09/553695  
04/21/00

☐ Certified copy(ies) of application(s)

_____	_____	_____
(country)	(appln. no.)	(filed)
_____	_____	_____
(country)	(appln. no.)	(filed)
_____	_____	_____
(country)	(appln. no.)	(filed)

from which priority is claimed.

☐ An assignment of the invention to \_\_\_\_\_.

☐ A check in the amount of \$40.00 to cover the recording fee.

☐ Please charge \$40.00 to Deposit Account No. 06-1075 in payment of the recording fee. A duplicate copy of this transmittal letter is transmitted herewith.

☐ An associate power of attorney.

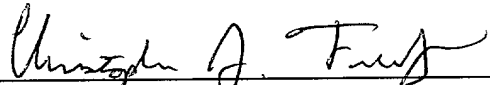
☒ A Verified Statement Claiming Small Entity Status.

☒ PrintEFS Data Sheet.

The filing fee has been calculated as shown below:

FOR	NUMBER FILED	NUMBER EXTRA	RATE	FEE
BASIC FEE				\$345.00
TOTAL CLAIMS	27	- 20 = 7	X \$ 9 =	\$ 63.00
INDEPENDENT CLAIMS	2	- 3 = 0	X \$39 =	\$0.00
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS				+ \$130 = \$
TOTAL				<u>\$408.00</u>

- [X] A check in the amount of \$408.00 in payment of the filing fee is transmitted herewith.
- [ ] This application is being filed unaccompanied by a filing fee. The appropriate filing fee will be paid in response to a Notice to File Missing Parts, pursuant to 37 C.F.R. § 1.53(f).
- [X] The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 C.F.R. § 1.16, in connection with the paper(s) transmitted herewith, or credit any overpayment of same, to deposit Account No. 06-1075. A duplicate copy of this transmittal letter is transmitted herewith.
- [ ] Amend the specification by inserting before the first line the sentence: -- This is a [ ] continuation-in-part, of application Serial No.: \_\_\_\_\_, filed  
entitled \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- [ ] Please charge \$\_\_\_\_\_ to Deposit Account No. 06-1075 in payment of the filing fee. A duplicate copy of this transmittal letter is transmitted herewith.

  
\_\_\_\_\_  
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Serial or Patent No.: To Be Assigned Docket No.: GTX-001  
Filed or Issued: Herewith

For: METHOD AND APPARATUS FOR CONDUCTING ELECTRONIC  
COMMERCE TRANSACTIONS USING ELECTRONIC TOKENS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37 C.F.R. 1.9(f) AND 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am:

- ☐ The owner of the small business concern identified below:  
☒ An official of the small business concern empowered to act on  
behalf of the concern identified below:

NAME OF CONCERN: GTX Corporation  
ADDRESS OF CONCERN 2390 East Camelback Road, Suite 410  
Phoenix, Arizona 85016

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. 121.3-18, and reproduced in 37 C.F.R. 1.9(d), for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled METHOD AND APPARATUS FOR CONDUCTING ELECTRONIC COMMERCE TRANSACTIONS USING ELECTRONIC TOKENS by inventor Marvin T. Ling described in:

- ☒ The specification filed herewith.  
☐ Application Serial No. \_\_\_\_\_, filed \_\_\_\_\_.  
☐ Patent No. \_\_\_\_\_, issued \_\_\_\_\_.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the

invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 C.F.R. 1.9(d) or by any concern which would not qualify as a small business concern under 37 C.F.R. 1.9(d) or a nonprofit organization under 37 C.F.R. 1.9(e). \*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. 1.27)

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Andrew M. Ling  
TITLE OF PERSON OTHER THAN OWNER Senior Vice President and General Counsel  
ADDRESS OF PERSON SIGNING 2390 East Camelback Road, Suite 410  
Phoenix, Arizona 85016

SIGNATURE



DATE April 21, 2000

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Citizenship Country:: US

## CORRESPONDENCE INFORMATION

Correspondence Customer Number:: 1473  
Fax One:: 212.596.9090

## APPLICATION INFORMATION

Title Line One:: METHOD AND APPARATUS FOR CONDUCTING ELEC  
Title Line Two:: TRONIC COMMERCE TRANSACTIONS USING ELECT  
Title Line Three:: RONIC TOKENS  
Total Drawing Sheets:: 13  
Formal Drawings?: No  
Application Type:: Utility  
Docket Number:: GTX-001  
Secrecy Order in Parent Appl.?: No

## REPRESENTATIVE INFORMATION

Registration Number One:: 34408  
Registration Number Two:: 39164  
Registration Number Three:: 42557

## CONTINUITY INFORMATION

This application is a:: NON PROV. OF PROVISIONAL  
> Application One:: 60/178,239  
Filing Date:: 01-26-2000

Source:: PrintEFS Version 1.0.1

GTX-001

METHOD AND APPARATUS FOR CONDUCTING  
ELECTRONIC COMMERCE TRANSACTIONS  
USING ELECTRONIC TOKENS

Related Applications

- 5           This application claims priority from U.S.  
provisional application Serial No. 60/178,239, filed  
January 26, 2000.

Field of the Invention

- 10           The present invention relates to methods and  
apparatus for conducting electronic commerce using  
electronic tokens. More particularly, the present  
invention provides a means to purchase, rent, or extend  
the rental period on software or other products and  
services using electronic tokens, which may be  
15   purchased either on-line or off-line.

Background of the Invention

- Electronic commerce using the World Wide Web  
(Web) is exploding in growth. Many Web sites have been  
developed through which Web service providers may  
20   advertise and offer a variety of products for sale. As  
electronic commerce becomes popular, increasing numbers  
of vendors are offering a variety of products and  
services on the Web. Among these vendors are software

vendors, known as application service providers (ASPs), who provide software for sale or rental over the Web.

Software products being offered by an ASP are typically displayed at the purchaser's client computer.

- 5 The display may include a description of each software program and a price for the software. As the purchaser sends a request to purchase software programs to the ASP server, the server must interact with the client system to confirm the purchases and the payment method.
- 10 When the ASP server accepts the purchase order and the payment method, the ASP server will download the software product electronically to the purchaser's client computer. To prevent unauthorized use of the software product, each software product is typically
- 15 protected by encryption, usually referred to as a software lock (or key).

Upon successful completion of the purchase transaction, the ASP will download a decrypted version of the software or an authorization code which will

20 "unlock" the software for the purchaser if the software being purchased is already installed on the purchaser's client computer. The latter situation may exist if the rental period of the software product has expired and the purchaser wishes to extend its use.

- 25 Since some software products are relatively expensive or use of a particular software product may become obsolete after a period or number of uses by a purchaser, the purchaser may want to rent the software product instead of purchasing it outright. Thus, the
- 30 software may be rented for use for a certain period of time or for a certain number of uses. For example, it may be preferable to rent computer games rather than purchase them, since computer games often lose their interest and appeal after repeated playing.



Additionally, a purchaser may wish to rent the use of a software program that is used only occasionally, such as a language translator or document clean-up or editing software. The rental of software thus provides  
5 users a relatively inexpensive and economic method to use software.

When a user finds that he is using a piece of rented software repeatedly, it may be desirable to extend the rental period, or to convert rented software  
10 to permanent use. An ASP may, therefore, offer users the ability to purchase additional uses of a software product, extend the rental period of a software product, or convert rented software to permanent use. These operations are typically achieved by sending the  
15 user new authorization codes or keys that enable the software to continue operation until the new number of uses or time period has expired. By providing only a new authorization code or key, the ASP avoids having to re-download the software to the user's computer.

20 As the use of an ASP becomes more popular, the interaction between purchaser client computers and ASP servers will become much more frequent. Therefore, it will be desirable for ASPs to provide their purchasers the convenience of minimizing the  
25 requirement for interaction between a client computer and the ASP server in order to complete the purchasing or rental transaction, as the case may be. It would also be desirable for ASPs to minimize or limit the frequency of asking the purchaser to transmit the  
30 user's private, sensitive information, such as credit card information. Although the purchaser's credit card number is encrypted during the transmission, it will be highly desirable to minimize its exposure through the Web.

Additionally, some software rentals may have a very low cost. For example, renting a single page use of a translation package may cost less than the typical fees associated with processing credit card transactions. Such "micropayment" transactions, sometimes amounting to only fractions of a cent, may also occur in the context of providing access to media, or Web-based services, such as search engines. In each of these cases, it is necessary to provide a way for users to pay for such transactions without incurring the overhead of a credit card charge.

Similar demands are present for vendors of products and services other than software. While there may be many consumers on the Web interested in purchasing or renting a wide variety of products and services, many of these consumers are either unwilling to take the risk of using their credit card over the Internet, or do not possess a credit card that may be used to make purchases on the Web. Additionally, some products and services available over the Web are small enough in cost that they do not justify the overhead of handling credit card transactions.

To address these concerns, various forms of electronic currency have been developed and marketed by numerous companies. For example, eCash Technologies Incorporated, of Bothell, Washington, offers a product called "eCash", which relies on encryption and digital signature technology to permit selected "eCash" banks to issue "eCash" currency to users, which may be spent on the Web sites of vendors who will accept this "eCash". These vendors may then exchange the "eCash" for traditional money through an "eCash" bank. The use of "eCash" permits micropayments, and permits users to

purchase products and services on the Web without using a credit card.

The "eCash" system, and other similar systems, eliminate the need to use a credit card for each on-line transaction, and permit micropayments. Such systems require that users and merchants make arrangements with authorized banks, and require both the user and the merchant to convert between real currency and electronic currency through an authorized bank.

Another system is provided by RocketCash Corporation, of Mountain View, California. The RocketCash system sets up accounts for teens who do not have credit cards, and permits their parents to add money to the accounts using checks, money orders, or credit cards. A teen may then shop on the Web, and have the purchases billed to his or her RocketCash account. This eliminates the need for credit cards, but does not address micropayments. Additionally, it is still necessary to establish and fund an account with a single central entity (i.e. RocketCash Corporation) before goods may be purchased.

InternetCash Corporation, of New York, New York, offers a similar product, called InternetCash™, based on pre-paid card that is purchased in pre-determined denominations from a store, and may be used at selected on-line merchants. The InternetCash™ system can handle transactions smaller than will be processed by most credit cards, and provides a means to anonymously purchase items on the Internet, without using a credit card. Like other previously known electronic currency systems, InternetCash™ requires merchants to obtain payment from a central organization.

Another electronic currency, called "Beenz", is provided by Beenz.com, Inc., of New York, New York. The "beenz" system permits registered users to earn "beenz" currency as an incentive for visiting particular Web sites, shopping on-line at particular Web sites, and other on-line activity. The currency "earned" by these activities may be spent at selected Web vendors. This system, while it does not use a credit card, and may be used for micropayments, is not well suited to more general use, as there is no way to purchase the "beenz" currency. Additionally, as in the other examples cited above, vendors must rely on a single organization to receive payment in real money.

Numerous patents on electronic currency have been issued. Among these are U.S. Patent Number 5,983,207, to Turk et al., and U.S. Patent Number 5,671,364, to Turk, which discuss electronic currency systems based on gold or some other commodity held at a central location. U.S. Patent Number 4,977,595, to Ohta et al., describes cryptographic techniques that may be used by a bank to issue electronic cash. Like the other systems described hereinabove, the methods described in these patents use central organizations, such as banks, to manage user accounts and to handle transactions.

Such systems necessarily impose overhead, in that both the vendors who accept these various forms of electronic currency, and the users who buy items in exchange for electronic currency must deal with a central organization, such as a bank. Additionally, since the central organization controls the issuance of the electronic currency, the vendors who accept the electronic currency have no control over the value of the electronic currency, its sale price, the terms on

which it may be bought, or to whom the electronic currency is sold. For example, it is not possible using such systems for a vendor of products or services to agree with his customer on payment terms for  
5 electronic currency that will be used to purchase goods, since the customer must pay a bank or other third-party organization for the electronic currency.

In view of the above, it would be desirable to provide apparatus and methods that permit a variety  
10 of payment options, such as credit card purchases, checks, money orders, or purchase orders to be used to purchase electronic currency or tokens.

It would also be desirable to provide electronic currency or tokens that may be issued and  
15 used with minimal overhead, and that do not require on-line communication with a bank or other organization to issue or use the tokens.

It would further be desirable to provide apparatus and methods that give a vendor complete  
20 control over the sale and distribution of electronic currency or tokens that may be used to purchase products and services from that vendor.

#### Summary of the Invention

It is an object of the present invention to  
25 provide apparatus and methods that permit a variety of payment options, such as credit card purchases, checks, money orders, or purchase orders to be used to purchase electronic currency or tokens.

It is also an object of the present invention  
30 to provide electronic currency or tokens that may be issued and used with minimal overhead, and that do not require on-line communication with a bank or other organization to issue or use the tokens.

It is a further object of the present invention to provide apparatus and methods that give a vendor complete control over the sale and distribution of electronic currency or tokens that may be used to  
5 purchase products and services from that vendor.

These and other objects of the present invention are achieved by providing apparatus and methods that permit a vendor to directly issue electronic tokens that may be used to purchase products  
10 and services from that vendor. A Web site maintained by the vendor is provided with the added ability to sell electronic tokens to users of the Web site in exchange for payment in a variety of forms. Electronic tokens purchased from the vendor are kept in a user  
15 account in a database that is maintained by the vendor.

Because the vendor himself is the issuer of the electronic tokens, he may choose to issue the tokens in exchange for any form of payment that he is willing to accept. The methods and apparatus of the  
20 present invention support both on-line payment (e.g., using a credit card), and off-line payment (e.g., using a check, money order, or purchase order) for electronic tokens.

The vendor lists the prices of products and  
25 services offered on his Web site in terms of electronic tokens. Because the vendor is the issuer of the electronic tokens, in formulating these prices, he may set the value of the tokens to any level that he chooses.

30 Users purchase or rent products and services from the vendor's Web page using the electronic tokens. After a user chooses a list of products or services that he would like to purchase or rent, the system of the present invention checks to see if the user's

account contains a sufficient number of tokens to complete the purchase. If there are enough tokens in the user's account, the tokens used for the purchase or rental are subtracted from the user's account, and the  
5 purchase or rental may proceed. Otherwise, the user is given an opportunity to purchase additional tokens to cover the price of the products and services he desires.

If the vendor is an application service  
10 provider (ASP) who sells software for download, the methods and apparatus of the present invention permit the software to be purchased, or rented for a variety of terms using electronic tokens. Software may be rented for a particular time period, a number of uses,  
15 or a number of processings. Each of these forms of rental may be initiated or extended in exchange for electronic tokens. Extension of a software rental, in which the rented software is already installed on the user's computer, requires only that the user download a  
20 new authorization code for the software, rather than downloading the entire software application.

The present invention also provides methods for transferring electronic tokens between users. Additionally, methods are provided for handling  
25 purchases on an auction site using electronic tokens issued by the auction site.

#### Brief Description of the Drawings

The above and other objects and advantages of the present invention will be apparent upon  
30 consideration of the following detailed description taken in conjunction with the accompanying drawings, in which like characters refer to like parts throughout, and in which:

FIG. 1 is an overview of the networked environment in which the methods and apparatus of the present invention are used;

FIG. 2 is a diagram of the software executing  
5 on a server built in accordance with the principles of the present invention;

FIG. 3 is a flowchart of a method for establishing a user account;

FIG. 4 is a flowchart of a method the permits  
10 users to purchase additional electronic tokens, either on-line or off-line;

FIG. 5 is a flowchart showing a method for verifying that a user has an account, and for initiating a shopping session;

FIG. 6 is an example screen from an  
15 application service provider, showing categories of software available for sale or rental;

FIG. 7 is an example screen from an application service provider, showing various types of  
20 software rental or purchase that are available;

FIG. 8 is an example screen from an application service provider, showing an order list containing software rentals and purchases that have been selected by a user, to be paid for using  
25 electronic tokens;

FIG. 9 is an example screen from an application service provider, verifying the user's order;

FIG. 10 is a flowchart showing a method for  
30 verifying that a user has enough tokens to complete a purchase;

FIG. 11 is a flowchart of a method for transferring electronic tokens from one user to another;



FIG. 12 is a flowchart of a method for verifying that use of rental software is authorized; and

FIG. 13 shows an embodiment of the present invention for use on an auction site, in which  
5 electronic tokens are used for payment.

#### Detailed Description of the Invention

The present invention provides a method and system for conducting business transactions in a  
10 networked environment using "electronic tokens" (or "tokens") as a price for each item or product being offered for sale or rental by a vendor. As a user creates his order list, the total number of tokens required (RT) is constantly updated and displayed  
15 together with the user's available tokens (AT). To complete the business transaction, the user can simply click on order and order confirmed buttons on the display. The total number of tokens used for purchases are subtracted from the user's available tokens (AT)  
20 which is also updated and displayed at the client computer.

Since electronic tokens are used for the business transaction, the need to transmit the user's credit card number and other personal sensitive  
25 information between the user's computer and the vendor's computer for each transaction is eliminated. Thus, the method and system of the present invention provides users the convenience of minimizing interactions between the user's computer (the client  
30 computer) and the vendor's computer (the server) thus reducing overhead. Furthermore, security for the user's personal sensitive information is improved.

Additionally, since the electronic tokens are issued directly by the vendor of the software or other products and services on which the tokens may be spent, rather than by a bank or other centralized  
5 organization, the vendor retains control over issuing and redeeming the tokens. The vendor is able to make whatever arrangements he or she desires for payment for the tokens, including both on-line (e.g. credit card) and off-line (e.g. check, purchase order, billing)  
10 transactions. It should be noted that as used herein, a vendor includes any subsidiaries, affiliates, and other corporate entities or persons authorized by the vendor to issue tokens.

The methods and system of the present  
15 invention do not require that any payment be made using the user's credit card. Of course, the user has the option of using a credit card to purchase tokens using the on-line method, but may avoid use of a credit card by using the off-line method for purchasing tokens.  
20 Because the user need not use a credit card for his purchases, it is unnecessary for the user to have a credit card, or for the user's computer or the vendor's computer to interact over the network with a bank or other financial institution to process credit card  
25 transactions. Additionally, since orders can be handled without credit card transactions, the overhead associated with such transactions can be reduced or eliminated, permitting micropayments. Further, since small purchases are paid for in tokens, the vendor need  
30 not send out an invoice or incur other overhead involved in handling financial transactions with small purchases.

A further benefit of using the vendor-issued electronic tokens of the present invention is that

privacy risks are decreased. Since all purchases or business transactions are done using tokens, very little or no personal sensitive information, such as the user's credit card number, need be transmitted over communication lines, such as the Internet. Although information transmitted via the Internet may be encrypted, it is still desirable to eliminate or minimize such transmissions, since they may be intercepted and decrypted. Furthermore, since the vendor and user interact directly for the purchase and use of electronic tokens, rather than relying on a third party such as a bank, users may be selective about which vendors they are willing to trust with their private information.

It will be apparent to one of ordinary skill in the relevant arts that although the electronic tokens described herein may be of a single denomination, multiple denominations of electronic tokens could be provided. For example, a vendor may offer "silver" tokens, having a unit value, and "gold" tokens, having a value of ten "silver" tokens. The vendor may optionally price the various denominations of electronic tokens however he chooses. For instance, in the example given above, the "silver" tokens may be priced at ten cents each, while the "gold" tokens are priced at ninety-five cents each, giving the user a discount for purchasing "gold" tokens.

Referring now to FIG. 1, the networked environment and apparatus of the present invention are described. Server computer 20 is controlled by a vendor who offers products and services for sale or rental over a network, such as the Internet. Server computer 20 includes processor 22, memory 24, storage 26, and network interface 28. In a preferred

embodiment, server computer 20 executes Web server software, through which products and services are offered for sale or rental, and software for issuing and handling electronic tokens, which are used to pay  
5 for the products and services. Additionally, server computer 20 may execute database software, which stores information on products and services for sale or rental, and information about users and their accounts for storing electronic tokens. If the vendor is  
10 selling or renting software over the network, server computer 20 may execute software that issues authorization codes for use of the software that is being sold or rented.

It will be understood by one skilled in the  
15 art that the functions performed by server computer 20 may alternatively be performed by several computers controlled by the vendor. In situations where the vendor is handling a high volume of orders over the network, it may be necessary to distribute the tasks  
20 performed by server computer 20 among several computers for performance reasons.

Server computer 20 is connected to network 30 through network interface 28. Network 30, preferably the Internet, is a communication network that connects  
25 server computer 20 to one or more client computers 32. Each of client computers 32 is operated by a user who may connect with server computer 20 through network 30 for the purpose of purchasing or renting products and services from the vendor who controls server computer  
30 20. Each of client computers 32 includes a processor (not shown), memory (not shown), and a display 34. Each of client computers 32 preferably executes Web browser software, or other software that permits client computers 32 to communicate with server computer 20.

Client computers 32 may also execute software that handles authorization codes for software products that are purchased or rented from the vendor who operates server computer 20.

5           Referring now to FIG. 2, the software executing on server computer 20 is described in greater detail. In a preferred embodiment, server computer 20 executes Web server 40, which communicates across the Internet with numerous Web browsers to provide access  
10 to Web pages 42. Web pages 42 may be predefined static Web pages, or may include Web pages that are dynamically generated, using CGI scripts, servlets, or any other technology that permits a Web server to dynamically generate or modify Web pages. For example,  
15 Web pages 42 may be generated to contain information on products extracted from products database 47.

Server computer 20 also executes Web engine 44, which handles electronic tokens, as described in detail hereinbelow. Web engine 44 communicates between  
20 Web server 40 and database server 43 to handle data on users, user accounts, and other data concerning electronic tokens and users.

Server computer 20 also executes database server 43, which maintains user database 46, product  
25 database 47, user order and account number data 48, and product sold records 49. Database server 43 may also manage other databases and tables (not shown) for operating an electronic commerce Web site.

User database 46 contains information on each  
30 user of the vendor's Web site, including the user's name or other identifying information, account number, and any personal information on the user (i.e. credit card numbers, phone numbers, address, etc.) that the vendor requires. User database 46 also preferably

includes information on the number of electronic tokens available to each user. User database 46 may also maintain data on how the user has spent tokens in the past, on whether the user is a "preferred customer,"  
5 eligible to receive discounts on token purchases and other bonuses, the user's credit and payment status, and any other information that may assist the vendor to handle and track its customers.

Product database 47 contains details about  
10 products and services offered and their descriptions. These details preferably include at least a product name and a product price in tokens. Product database 47 may also include a variety of other information about products and services offered by the vendor,  
15 including descriptions and images of products, information on the manufacturers of products, additional information on services, information about the availability and stock on hand for products, and other information that would be useful for handling  
20 Web-based sales of products and services.

If the products being offered by the vendor include downloadable or rental software, product database 47 preferably contains information about the types of purchase or rental that are offered for each  
25 such software product. These types include:

- a) permanent use;
- b) rental use of a specified fixed time;
- c) rental use for a specific number of times;
- d) rental use for processing a specific  
30 number of a given task;
- e) converting rental use from specific fixed time to an unlimited permanent use;
- f) converting rental use from a specific number of times to an unlimited permanent use;

g) converting rental use from processing a specific number of a given task to an unlimited permanent use;

h) additional fixed time for an application  
5 software already rented;

i) additional number of times to use for an application software already rented; and

j) additional processing of a specific number of a given task via an application software already  
10 rented.

Additionally, database server 43 handles user order and account number data 48, which maintains user order data with cross-referencing to the user account number while a client computer and server computer 20  
15 interact. Database server 43 also handles product sold records 49, which keep track of products sold for future updating of products offered at the server. Both the user database 46 and product sold records 49 are updated when a business transaction is completed  
20 between a user client computer and server computer 20.

As will be understood by one skilled in the relevant arts, the software that is described hereinabove as executing on server computer 20 may be distributed among multiple server computers.  
25 Similarly, the databases and other records and data maintained by database server 43 may be distributed between multiple database servers executing on multiple server computers.

Referring now to FIG. 3, The process for  
30 registering users with the system is described. In a preferred embodiment of the present invention, a user can register and establish an account over the network (on-line method) or using telephone, facsimile machine or mail (off-line method). It should be noted that as

used herein, the use of e-mail between the user's personal computer (PC) and the vendor is considered an off-line method, since communications using e-mail is not a part of the business transaction between the user's client computer and the vendor's server computer.

The registration and establishment of an account with the vendor, either using the on-line method or off-line method requires a user to provide the vendor with personal information, such as name, address, telephone number, facsimile machine number, e-mail address, etc. To properly and securely identify a user, the vendor may require additional private information from the user, that may include the maiden name of the user's mother, the user's social security number, the user's birth date, and a password for use as a Personal Identification Number (PIN). As used herein, this personal private information is collectively called "other identifiers". These other identifiers are used from time to time to assure proper identification of the user. The user may change his PIN at any time if he so desires.

After the user provides the vendor the above information, a user is considered "Registered" and he is assigned an account number. This user account number, however, may be held inactive until the user completes the purchase of an initial minimum number of tokens (MT), as required by the vendor. Alternatively, the vendor may issue a number of tokens to the user when the user opens an account, either for payment of a registration fee, or for free, as an incentive for registration. When this is done, the user's account number becomes active immediately.



Steps 101 through 103 show the process for off-line registration. In step 101 the vendor provides a potential user information about the vendor or application service provider (ASP) which may include  
5 the type of products it offers to sell and/or rent, the concept of using tokens, how tokens can be purchased, and the requirement for the user to purchase an initial minimum number of tokens (MT).

If the user wants to proceed, at step 102, he  
10 is asked to provide personal information, which normally includes the user's name, address, telephone number, facsimile number, if any, and e-mail address. He also is asked for additional personal information (i.e., other identifiers), which may include a personal  
15 identification number (PIN) which will be changeable at the user's request. The other identifiers may also include the user's birth date, his social security number, and his mother's maiden name. This additional personal information (i.e., other identifiers) will be  
20 used, if necessary, to ensure correct identification of the user.

In step 103, the user is asked by the vendor how he wishes to pay for the initial minimum number of tokens (MT) required by the vendor. The vendor may, at  
25 his option, based on information given to him by the user, accept payment by the user's personal check, via the user's credit card, via a purchase order, or through any other payment method that the vendor is willing to accept from the user.

30 Once the user and vendor have agreed upon a payment method, the vendor inputs the user's information into server computer 20. At step 104, Server computer 20 assigns a user account number, which

will be inactive until the user actually purchases or otherwise acquires the minimum number of tokens.

Next, the vendor informs the user of the account number and that this account will become active  
5 only after the purchase or acquisition of the initial minimum number of tokens (MT). When the user's payment for MT is confirmed, or the user otherwise acquires the minimum number of tokens, the server will make the user's account number "Active", create an entry and an  
10 account for the user in user database 46, set the user's available number of tokens (AT) to the minimum number of tokens, or the number of tokens acquired by the user, if the number is larger than the minimum (steps 105, 106, 107). Next, at step 108, the vendor  
15 informs the user that his account number is now active and that he is ready to make purchases.

If the on-line method is used, steps similar to those taken in the off-line method are taken, as indicated in steps 111, 112, 113, 104, 105, 106, 107,  
20 and 118. In the on-line method, communications between the vendor and the user occur over the network, using Web pages, for example. Additionally, when using the on-line method for payment, the user may be restricted to using a credit card to purchase the minimum number  
25 of tokens. If the credit card number given by the user is not accepted by a banking system accessed over the network by server computer 20, server computer 20 will ask the user to provide a different credit card number, as shown in step 114.

30 To avoid prolonging interaction between a client computer and server computer 20, after several unsuccessful attempts to process a valid credit card transaction, server computer 20 may inform the user and terminate the connection between the user's computer

and server computer 20, as indicated in step 115. Similarly, if the user does not complete the requested personal information as indicated in step 112, a time limit is set, after which server computer 20 will  
5 inform the user that the connection with his client computer will be terminated, as shown in step 116.

Referring now to FIG. 4, a method for purchasing additional tokens from the vendor is described. In a preferred embodiment of the present  
10 invention, a user may purchase tokens using an on-line method or an off-line method. The minimum number of tokens a user is required to purchase (MT) and the price for each token may vary among vendors. Particularly, variations may exist among vendors in  
15 foreign countries and depending on the type or category of products they wish to sell and market on their particular Web site. Additionally, vendors may offer discounted prices for electronic tokens to "preferred" customers, or based on the volume of tokens purchased.  
20 In accordance with the present invention, since each vendor issues electronic tokens to be used to purchase its products and services, each vendor may set its own prices and policies for electronic tokens.

When using the off-line method for purchasing  
25 electronic tokens, the user may contact the vendor using the telephone, facsimile machine, regular mail or e-mail, and identify himself by giving the vendor his name and account number (step 201). In step 202, the operator further confirms the user's identity by asking  
30 for the user's PIN and perhaps other information confirming the user's identity.

At step 203, the user tells the vendor the number of additional tokens he wishes to purchase, and at step 204, the payment method for this new purchase

is agreed upon between the user and the vendor. This may include payment by check, purchase order, by the user's credit card, or any other form of payment that the vendor is willing to accept from the user. Once  
5 the user's payment method is accepted or payment is received, the vendor will update the user's account in user database 46, and update the number of available tokens (AT) in the user's account (steps 206, 207 and 208). As shown in step 207, the newly purchased tokens  
10 (NT) are added to the user's available tokens (AT).

If the user elects to purchase additional tokens using the on-line method, steps similar to those using the off-line method are taken, as indicated in steps 211, 212, 213 and 214. As in the registration  
15 process, the communication between the vendor and the user is handled over the network, for example, using Web pages. Additionally, the user's payment options may be limited to using a credit card or other payment method that can be handled over a network such as the  
20 Internet. As with the purchase of the initial minimum number of tokens, an attempt to obtain a valid user credit card number will be made by server computer 20, as illustrated in steps 215 and 216.

It should be noted that the user may purchase  
25 additional tokens even while he is shopping. For example, if the user is shopping on the vendor's Web site, and discovers that his available tokens are insufficient to cover the total cost of products and services he wishes to purchase, he may elect to  
30 purchase additional tokens. In step 217, the server recognizes such situations, and returns control back to the user at his client computer after the tokens have been purchased. The server will display the last Web

page viewed by the user when he switched to purchase additional tokens.

Referring now to FIG. 5, a method for initiating shopping over the network is described. A user may interact across a network, such as the Internet, with a vendor's server computer 20 using his client computer. Server computer 20 will ask the user whether he has an account with the vendor. If not, the user will be provided information on registration, and may be given an opportunity to open an account with the vendor. At the user's option, he may browse the vendor's Web pages and view various products and services offered by the vendor. If the user already has an account number, the server will verify the user's identity with a password, PIN, by use of other identifiers provided by the user, or by some combination of these.

It should be noted that a user with an inactive account number may browse the vendor's Web pages to view its services and various products being offered, just as may an unregistered user. However, the user may not be permitted to go beyond selected Web pages where cost information is listed and will not be permitted to create an order list and make an order for purchases or rentals. These restrictions are immediately removed when the user acquires the minimum number of tokens, and his account number becomes active. The minimum number of tokens the user purchased becomes his available tokens within the particular vendor Web page from which he purchased the tokens, only for use with that vendor.

In step 301, server computer 20 sends an introductory page for display to a client computer, which displays the introductory page to a user. This

page preferably contains a message informing the user of the types of products and services available from the vendor, and that the vendor uses electronic tokens for payment. The introductory page also preferably  
5 contains a proceed button, that the user may select if he wishes to proceed, and enter the vendor's Web site, and a quit button, that the user may select if he does not wish to enter. The introductory page may also contain a home button, a back button, a forward button,  
10 and a last button, to facilitate rapid navigation through the vendor's Web pages.

It will be understood by one skilled in the relevant arts that display of an introductory page is optional, and some vendors may choose not to use such a  
15 page. Additionally, the message displayed in the introductory page will vary, according to the wishes of the vendor. Further, the above-described buttons may optionally be omitted, greyed out if not available, renamed, or displayed in any usable positions on the  
20 introductory page. One skilled in the art will further recognize that the introductory page may contain various types of content, including text displayed in a variety of fonts or styles, graphics, animations, sounds, video, or any other content that may be sent  
25 across the network from server computer 20 for display on a user's client computer.

If the user chooses to proceed, at step 302 server computer 20 asks the user if he has an account with the vendor. If the user does not have an account,  
30 he will be asked in step 303 whether he would like to register and establish an account with the vendor. If the answer is yes, he will be directed to the process of registration (either on-line or off-line), as described hereinabove with reference to FIG. 3. If the

user is not ready to register, but wishes to continue browsing the Vendor's site, at step 305 he will be given an opportunity to proceed into the site, but without the ability to complete any purchases without  
5 first registering.

If the user already has an account, at step 304, he enters his account ID, preferably a user name or account number, and may be prompted by server computer 20 for further identifying information, such  
10 as a password, PIN, or other personal information. If the user correctly identifies himself to the vendor's system, the user may proceed with shopping. Otherwise, the user will be disconnected from server computer 20.

At step 306, the system determines whether  
15 the user is interested in purchasing or renting software or non-software products. This determination may be made by asking the user whether he is interested in software products and services or other products. Alternatively, this determination may be automatically  
20 made, for example, for vendors who do not sell software, or who only sell or rent software for download.

If the vendor is an application service provider (ASP), who rents or sells software for  
25 download, and the user wishes to view the software products being offered, then at step 308, the system displays descriptions of the software products that are available, and the types of purchase and rental that are available for each software product. If the user  
30 does not wish to view software products, or the vendor is not an ASP, then at step 307, the system causes the user's computer to display information on non-software products and services.

The information displayed by the vendor or ASP includes the price of each product or service, expressed as a number of electronic tokens. The user's available tokens also is displayed, if the user has an  
5 active account number.

Using the displays sent to his client computer by server computer 20, a user may select a subset of the products and services offered, and place the selected products on his order list. As the user  
10 adds and removes items from his order list, the total number of tokens required to pay for the selected products and services (RT) is constantly updated and displayed at the user's client computer. In this way, the user is constantly informed whether his available  
15 tokens, which is also displayed, will be enough to cover the total cost of his purchases.

If the user's number of available tokens is equal or larger than the number of tokens required for the products and services on the user's order list, the  
20 user can simply click an order button on the display to purchase or rent the items on the order list. Server computer 20 will send a confirmation of the user's orders, including information regarding downloading of software products, the total cost of products in  
25 numbers of tokens, and the number of tokens that the user has remaining in his account after the purchase.

When the user is satisfied with the order, he can click on an order confirmed button to complete the transaction. When an order is confirmed, server  
30 computer 20 will subtract the number of tokens required for the purchase from the user's account, and cause the user's client computer to display an acknowledgment of the purchases. If the user's order list included software, server 20 may start downloading the purchased



or rented software products if they are not already installed on the user's computer. If the user has purchased an extension of a rental period on a software product, or the purchased or rented software product is  
5 already installed on the user's computer, then server computer 20 will send a new authorization code for the software.

It will be understood by one skilled in the art that the method and system being described in the  
10 present invention for using vendor-issued tokens in a networked environment may be applied to both software and non-software products and services. However, the example preferred embodiment described herein will be described in terms of an ASP, that provides software  
15 products for sale or rental. The sale or rental of non-software products is similar to the sale or rental of software products, but is somewhat simpler, since there are fewer types of sale or rental of non-software products and services, and sale or rental of non-  
20 software products does not involve use of authorization codes. The methods for sale or rental of non-software products and services may be considered a subset of the methods used for sale or rental of software, as described hereinbelow.

25 Referring now to FIG. 6, a screen showing example available categories of software for sale or rental is shown. The example shows software category display 501 for an ASP that offers software products in the field of Scanned Document Enhancement, Document  
30 Raster Editing, Computer Aided Design, Engineering Document Management Systems, Language Translators and Computer Games. A user may select one of the categories by clicking the desired category. In this example, the user has selected the Document Raster

Editing category as shown with a check mark in corresponding box 502. The user can de-select the selected category by clicking again in the check-marked box. The user can go back to the previous display by clicking on back button 504, or proceed to the next display by clicking on proceed button 503.

In an example shown in FIG. 7, software availability page 601 displays software products A, B, C, and D listed under the selected software category from software category display 501 of FIG. 6. As shown by category headings 602, each software product may be available for purchase, rent by time, rent by number of uses, or rent by number of processings.

Corresponding to each software product and each category heading 602, there is an availability box 603. If an availability box 603 contains a check mark, then the corresponding software product is available in the corresponding category heading. Thus, in the example shown in FIG. 6, software product B is available for purchase or rental by time, software product C is available for purchase or rental by number of times of use, and software product D is available only for rental by number of processing tasks. The user may select the software products and categories of rental or purchase he desires by clicking on the corresponding availability box 603, if that availability box 603 contains a check mark.

Similar to the example shown in FIG. 6, back button 605 allows the user to go back to the previous display or step, and proceed button 604 will allow the user to go to the next step. At the option of the vendor or ASP, use of proceed button 604 may cause the display of a message informing an unregistered user that he must register before he may proceed further.

The user may then register with the vendor, following the method described with reference to FIG. 3.

FIG. 8 shows an example of order list display 700, in which the user has specified a subset of the products offered by the ASP as order list 701. With each of the software products in order list 701 the number of tokens required for purchase or rental is shown. In the example, software product A costs 100 tokens, and software product D is available only for rent, with a price in tokens that varies according to the number of processings that the user desires to access. In the example, the user has selected up to 1000 processings, at a cost of 80 tokens.

For the user's convenience, order list display 700 includes RT display 705, showing the total number of tokens required for the purchase, AT display 706, showing the total number of tokens available to the user, and remaining tokens display 707, showing the number of tokens that the user will have left if the purchase is made. Each of these displays automatically updates as the user adds and removes items from his order list.

If the user wants to know more detail about the software in order list 701, he can select a detail button 703 that corresponds to the product about which he would like further information. Additionally, since software product D is being rented, installation query 704 is used to ask the user whether software product D is already installed on his computer. If software product D is not already installed, then server computer 20 must download software product D to the user's computer, along with an appropriate authorization code. Otherwise, if software product D is already installed, then server computer 20 need only

send a new authorization code for the rental of software product D to be extended, saving download time and bandwidth.

Although user database 46 on server computer 5 20 may maintain information on whether the user has downloaded a selected software product in the past, it is still desirable to confirm with the user that the selected software product is installed, since the user may have removed the software product from his 10 computer, or may be accessing the ASP's Web site from a different client computer. Alternatively server computer 20 may automatically check for the presence of a selected software product on the user's client computer by causing the client computer to execute an 15 applet or other code to check for the presence of the selected software product.

Order list 701 may be modified by the user by clicking on the selection box next to the product to be added or removed. If an empty selection box is 20 clicked, a check mark will appear in the box, indicating that the product has been selected. If a selection box containing a check mark is clicked, the check mark will be removed, and the product will be deselected. As products are selected and deselected in 25 order list 701, RT display 705, AT display 706, and remaining tokens display 707 are automatically updated to reflect the number of tokens required for the purchase, the number of tokens available to the user, and the number of tokens that would remain in the 30 user's account if the purchase were completed. Once the user is satisfied with the contents of order list 701, his order may be entered by selecting order button 708.

As in other displays, back button 709 will return the user to a previous display if selected. Quit button 710 will immediately end the user's connection with the ASP's Web site, without completing the transaction.

FIG. 9 shows an example of order display 800. In this display, server computer 20 shows the details of the user's order in response to the user's clicking order button 708. Final RT display 801 shows the total number of tokens required for the purchase. User AT display 802 shows the number of tokens that the user has available at the time of purchase. New AT display 803 shows the number of tokens that the user will have available in his account after the purchase has been completed. In the example shown in FIG. 9, the purchase will require 180 tokens out of the user's 500 available tokens, leaving the user with 320 tokens after the purchase is completed.

If the user wishes to complete the order, he can click on order confirmed button 804, indicating that the order is acceptable. When order confirmed button 804 is clicked, server computer 20 will cause a message thanking the user for his purchase (not shown), and may start downloading any software products that need to be downloaded to the user's computer. This completes the business transaction and the user may click quit button 806 on the display to disconnect his client computer from server computer 20. If the user wants to change his order before confirming it, he can click on back button 805, to return to the previous display.

It will be understood by one skilled in the art that the example displays shown in FIGS. 6, 7, 8, and 9 may be modified in many ways without departing

from the invention. The layout of the elements on the page, the wording of the text, and even the presence or absence of many of the elements shown in these displays may be altered. For instance, for a non-ASP vendor,  
5 which does not offer software for download, installation query 704 of FIG. 8 would not be needed, and would not be displayed. Many other such modifications to the display layout and user interface may also be made, depending on the needs and desires of  
10 the vendor or ASP.

Referring now to FIG. 10, a method for handling purchases is described. When a user places an order, as described hereinabove, the user's available tokens must be updated. In some cases, a user may  
15 attempt to place an order even though he does not have enough tokens available in his account to cover the order. If the number of tokens required for a purchase is larger than the number of tokens available in a user's account, the server will advise the user to  
20 either remove items from his order list to reduce the number of tokens required, or to purchase additional tokens. The additional tokens can be purchased immediately using the on-line method or the user may purchase additional tokens using the off-line method.

25 In step 901, the system checks the total number of tokens required for a purchase (RT) against the number of tokens available to the user (AT). If the user has too few tokens to cover the purchase, at step 902, the user is advised of the shortage of  
30 tokens. The user is then given the options of removing items from his order list (step 903) or purchasing more tokens (step 904).

If the user chooses to remove items from his order list to reduce the required number of tokens, he

may return to an order list display, such as the one shown in FIG. 8. If the user decides to purchase more tokens from the vendor or ASP, he must decide whether to use the on-line purchase method or the off-line  
5 purchase method (step 905).

For the on-line method, the user may use a credit card, as described hereinabove with reference to FIG. 4. If the off-line method is chosen, it may not be possible for the vendor or ASP to immediately issue  
10 additional tokens to the user, since, for example, the vendor may have to wait for a check from the user to arrive in the mail and be processed by the user's bank. So the user does not have to go to the effort of rebuilding his order list when he has acquired enough  
15 tokens, he will be asked to if he wants to save his order list (step 906). If the user wishes to save his order list, server computer 20 will save the order list in user database 46 as a temporary, uncompleted order list, in step 907. In step 908, if the user does not  
20 wish to save the order list, the server will send an appropriate message and disconnect the client computer.

If the number of tokens required for the purchase is less than or equal to the number of available tokens, and the user clicks on order  
25 confirmed button 804. Then, at step 910, server computer 20 updates the number of tokens available in the user's account. This is done by subtracting the number of tokens required for the purchase (RT) from the number of available tokens (AT), and saving the new  
30 number of available tokens. Server computer 20 then updates the user database 46, and product sold records 49 (step 911), and sends a purchase confirmation message and thank you note to the user (step 912).

Finally, at step 913, if the user has purchased or rented any downloadable software, server computer 20 downloads any software or authorization codes that must be downloaded to the user's computer.

5 As explained above, this may include a step (not shown) of determining whether the software has already been installed on the user's computer. If the needed software is already installed, then only an authorization code need be downloaded. It will be

10 understood by one skilled in the art that for vendors who do not offer downloadable software (i.e. the vendor is not an ASP), step 913 is unnecessary.

Referring now to FIG. 11, a method of transferring electronic tokens from the account of one

15 user to another user's account is described. Such transfers provide a way for users to exchange electronic tokens issued by a vendor. This may be useful, for example, for conducting on-line auctions, in which one user of an auction Web site bids on

20 products or services offered by another user of the auction site. Instead of sending money to the seller to pay for goods, the buyer transfers electronic tokens issued by the auction site to the seller. Transfer of tokens also may be useful on sites where the vendor

25 does not allow tokens to be converted back to real money, as a way of giving unused tokens to those who may be able to use them.

At step 1001, server computer 20 will ask the user his account number. Next, at steps 1002 and 1003,

30 server computer 20 will request other personal information, such as a PIN number from the user, to further verify the user's identity.

Having verified the identity of the user from whom the tokens are being transferred, at step 1004,



the system next obtains the identity of the second party to whom the tokens are being transferred. In a preferred embodiment, the identifying information on the second party includes several fields, such as a  
5 name and address, that can be cross-checked, to confirm that there has not been an error in entering the information on the second party. To further confirm that there is no error, the user conducting the transfer may be asked whether he knows the second  
10 party's user account number. If this is not known, the server will obtain the account number from user database 46, and check to see if the second party is registered and has an account number with the server. If the server failed to find the second party's record  
15 with a valid account number, it will so advise the user and terminate the connection, as shown in step 1005.

If the second party has an account number, at step 1006, server computer 20 will ask the user the number of tokens he wants to transfer. In step 1007,  
20 server computer 20 will verify that the user has enough tokens available to allow the user to make the requested transfer. If not, in step 1008, the server will request that the user reduce the number of tokens to be transferred, advising him that the number of  
25 tokens available to him is insufficient. If the user does not wish to reduce the number of tokens being transferred, at step 1009, the transfer operation will end without completing the transfer of tokens. Alternatively, the vendor may offer to sell the user  
30 additional tokens, so that the transfer may be completed.

If the number of tokens being transferred is less than or equal to the number of tokens available in the user's account, then at step 1010 and 1011, server

computer 20 subtracts the number of tokens being transferred from the user's account, and updates user database 46 with the new number of tokens, and a record of the transaction. At steps 1012 and 1013, the  
5 transferred tokens are added to the account of the second party (i.e. the recipient), and user database 46 is updated to record the transfer of the tokens. Finally, at step 1014, server computer 20 displays the user's new number of available tokens, and informs the  
10 user that the designated number of tokens have been transferred to the second party.

In accordance with the principles of the present invention, since the vendor controls all aspects of token use on the vendor's site, tokens may  
15 only be transferred between users with accounts maintained by that vendor. Thus, tokens issued by one vendor may not be transferred to an account maintained on a different vendor's system. Similarly, tokens purchased from one vendor cannot be used to purchase  
20 products or services at a different vendor's site.

Referring now to FIG. 12, a flow chart illustrating a method of verifying authorization codes for use with rental software is shown. As explained hereinabove, through use of electronic tokens, users  
25 are able to make micropayments and conduct other low-overhead transactions that make rental of software products for a limited number of uses or a limited number of processings practical. Application service providers (ASPs) may offer access to a variety of  
30 downloadable software for purchase or rental. To insure that users do not exceed their allotted rental period, an authorization code is sent to the rental software that allows it to determine whether its use is authorized.

At step 1101, the software decodes the authorization code. Typically, authorization codes will be encrypted or otherwise encoded with information such as a time stamp or authorization code number that prevents a user from altering or duplicating an authorization code. Thus, to use an authorization code, the code should first be decrypted or decoded.

At step 1102, if the decoding of the authorization code failed, and use of the software product is not authorized, the software will display a message to the user advising him that the software is not authorized, and exit. Additionally, the software may automatically invoke a Web browser or other network tool to connect the user to an ASP who can sell the user a new authorization code for the software, in exchange for electronic tokens.

At step 1103, if the authorization code was valid, the software determines the type of the authorization code. If the authorization code authorizes permanent use of the software product, the verification process is over, and the software may execute. Otherwise, the authorization software must determine whether there is any time, uses, or processings left on the authorization code, depending on the type of authorization code.

If the authorization code is of a type that permits a number of processings, the software checks to see if the number of processings is zero (step 1104), or low (step 1105). If there are no processings left, the software displays a message, and exits. If the number of processings remaining is low, the software displays a message warning the user that the number of processings is low (step 1106), and continues. In either of these cases, the user may be automatically

connected with an ASP, and be given the opportunity to use electronic tokens to purchase additional processings.

5           If the authorization code indicates that there are still processings remaining, at step 1107, the software subtracts one from the number of processings, and at step 1108, the process is executed. Once the process is finished, it may be repeated until no processings remain.

10           If the authorization code is of a type that permits a number of days of use, or another time-based rental, the software checks to see if there is any time remaining (step 1110), or if the remaining time is short (step 1111). If the time period of the rental  
15 has expired, the software displays a message, and exits. If the remaining time is short, the software displays a message warning the user that the amount of time remaining is low (step 1112), and continues. In either of these cases, the user may be automatically  
20 connected with an ASP, and be given the opportunity to use electronic tokens to purchase additional time on the rental. If the authorization code indicates that there is still time remaining, at step 1113, the application program is executed.

25           If the authorization code is of a type that permits a fixed number of uses of the application program, the software checks to see if there are any uses remaining (step 1115). If so, one use is subtracted from the remaining uses (step 1116), and the  
30 software checks to see if the remaining number of uses is low (step 1117). If the remaining number of uses is low, the software displays a message warning the user that the number of uses remaining is low (step 1118), and continues. In either of these cases, the user may

be automatically connected with an ASP, and be given the opportunity to use electronic tokens to purchase additional uses of the rental software. Finally, at step 1113, if there was at least one remaining use of the software, the application program is executed.

It will be understood by one skilled in the art that there may be other terms for which software may be rented, and that the above-described authorization method could be easily modified to handle other types of software rental. The ability to use electronic tokens to reduce the overhead of software rental transactions, and the use of authorization codes to verify the legitimate use of rented software and to avoid unnecessary downloads facilitate a variety of software rental models.

Referring to FIG. 13, an alternative embodiment of the electronic token system of the present invention for use on an auction site or other site that facilitates transactions between users of the site is shown. Vendor 1201, instead of directly selling products and services, as in previously described preferred embodiments, acts as an intermediary through which users can sell products and services to each other. Additionally, vendor 1201 buys and sells electronic tokens that may be used by the users to transact business. By using electronic tokens as payment between users for products and services, the users are able to quickly and easily pay each other for products and services, without having to obtain and send a money order, as is typically required by sellers on current auction sites.

Vendor 1201 provides both on-line and off-line sale of electronic tokens, as described in detail hereinabove. Additionally, vendor 1201 may permit

electronic tokens to be redeemed for money, either on-line, through issuing a credit on a credit card, or off-line, by issuing and mailing a check for redeemed tokens.

5                Sellers 1202 are users of the Web site or other e-commerce venue offered by vendor 1201. Through vendor 1201, who may receive a commission, fee or other payment, sellers 1202 offer products and services for sale or auction, with prices or minimum bids listed in  
10 tokens.

              Buyers 1203 use the Web site provided by vendor 1201 to purchase electronic tokens from vendor 1201, and to purchase products and services from sellers. Buyers 1203 pay for products or services, or  
15 place bids for products and services using electronic tokens. Sellers 1202 may be paid for their products or services by transferring the appropriate number of electronic tokens between the accounts of buyers 1203 and sellers 1202.

20                Sellers 1202 may use the electronic tokens that they gain from selling their products and services to purchase products and services from other sellers. Alternatively, sellers 1202 may sell their tokens back to vendor 1201 for money.

25                This system offers numerous advantages over current auction sites and other venues for conducting e-commerce between individuals. First, the individual buyers 1203 and sellers 1202 are able to easily arrange payment, rather than requiring that checks or money  
30 orders be sent. Additionally, there is no need for buyers 1203 and sellers 1202 in different countries to be concerned about currency exchange, since all transactions are handled in electronic tokens, which may be bought and sold by vendor 1201 for any form of

currency that vendor 1201 chooses to accept. Further,  
vendor 1201 can make his "commission" on sales on the  
system by buying electronic tokens back from sellers  
1202 at a different price than they are sold to buyers  
5 1203, thereby simplifying the task of collecting  
payment from sellers 1202.

It will be understood by one skilled in the  
art that the embodiment of the present invention  
described with reference to FIG. 13 may be used for  
10 more than just auctions between individual buyers and  
sellers. The buyers and sellers may be businesses or  
other corporations, and there is no need that the  
transactions be carried out in auction style. Similar  
methods may be used in which sellers 1202 simply list  
15 their products and services with vendor 1201, with  
prices in electronic tokens, and buyers 1203 buy the  
products and services from sellers 1202 through vendor  
1201, using electronic tokens as the exclusive means of  
payment. As discussed above, only electronic tokens  
20 issued by the vendor may be transferred or used on that  
vendor's site.

While preferred illustrative embodiments of  
the present invention are described above, it will be  
evident to one skilled in the art that various changes  
25 and modifications may be made without departing from  
the invention. For example, electronic tokens may be  
given away in contests or as incentives, or different  
forms of on-line and off-line payment may be accepted  
at the option of vendors. It is intended in the  
30 appended claims to cover all such changes and  
modifications which fall within the true spirit and  
scope of the invention.

What Is Claimed Is:

1. A method of conducting electronic commerce, the method comprising:  
opening a user account with a vendor for a user;

issuing one or more electronic tokens from the vendor to the user, and adding the one or more electronic tokens issued by the vendor to the user account;

providing products and services that may be purchased through the vendor, wherein prices for the products and services are listed in units of electronic tokens;

permitting the user to select a subset of the products and services for purchase;

computing a total price for the selected subset of the products and services in units of electronic tokens; and

if the user account contains electronic tokens having a value equal to or greater than the total price, permitting the user to purchase the selected subset of the products and services, and subtracting the total price from the user account.

2. The method of claim 1, wherein issuing one or more electronic tokens from the vendor to the user comprises permitting the user to purchase the one or more electronic tokens from the vendor.

3. The method of claim 2, wherein permitting the user to purchase the one or more electronic tokens from the vendor comprises permitting the user to conduct an on-line transaction using a



credit card to purchase the one or more electronic tokens.

4. The method of claim 2, wherein permitting the user to purchase the one or more electronic tokens from the vendor comprises permitting the user to conduct an off-line transaction to purchase the one or more electronic tokens.

5. The method of claim 4, wherein permitting the user to conduct an off-line transaction to purchase the one or more electronic tokens comprises permitting the user to use a purchase order to purchase the one or more electronic tokens.

6. The method of claim 4, wherein permitting the user to conduct an off-line transaction to purchase the one or more electronic tokens comprises permitting the user to request to be billed for the one or more electronic tokens.

7. The method of claim 4, wherein permitting the user to conduct an off-line transaction to purchase the one or more electronic tokens comprises permitting the user to use phone, fax, mail, or e-mail to purchase the one or more electronic tokens.

8. The method of claim 4, wherein permitting the user to conduct an off-line transaction to purchase the one or more electronic tokens comprises permitting the user to purchase electronic tokens without using a credit card.

9. The method of claim 1, wherein issuing the one or more electronic tokens comprises setting a price for the one or more electronic tokens, the price determined by the vendor.

10. The method of claim 1, wherein opening a user account with a vendor comprises registering the user with the vendor.

11. The method of claim 10, wherein registering the user with the vendor comprises recording personal information about the user in a database maintained by the vendor.

12. The method of claim 11, wherein registering the user with the vendor comprises acquiring personal information about the user through off-line communications.

13. The method of claim 10, wherein opening a user account with the vendor further comprises issuing a predetermined minimum number of electronic tokens to the user.

14. The method of claim 1, further comprising issuing additional electronic tokens to the user.

15. The method of claim 14, wherein issuing additional electronic tokens to the user comprises permitting the user to purchase additional electronic tokens if the user account does not contain enough electronic tokens to cover the total price of the selected subset of products and services.

16. The method of claim 14, wherein issuing additional electronic tokens to the user comprises permitting the user to purchase additional electronic tokens through an on-line transaction using a credit card, without disrupting a process of selecting products and services.

17. The method of claim 1, further comprising displaying a number of available electronic tokens in the user account on a computer screen.

18. The method of claim 1, wherein providing products and services that may be purchased through the vendor comprises providing software to be purchased or rented in exchange for electronic tokens.

19. The method of claim 18, wherein providing software to be purchased or rented comprises providing software that is rented for a limited time.

20. The method of claim 18, wherein providing software to be purchased or rented comprises providing software that is rented for a limited number of uses.

21. The method of claim 18, wherein providing software to be purchased or rented comprises providing software that is rented for processing a given task for a specific number of times.

22. The method of claim 18, wherein providing software to be purchased or rented further comprises permitting the user to extend the software rental in exchange for electronic tokens.

23. The method of claim 18, wherein providing software to be purchased or rented further comprises permitting the user to convert rental software to purchased software in exchange for electronic tokens.

24. The method of claim 18, wherein providing software to be purchased or rented further comprises determining if a selected software program is already installed on a user's computer, downloading and installing the selected software program if the selected software program is not already installed on the user's computer, and sending an authorization code, without downloading the selected software program, if the selected software program is already installed on the user's computer.

25. The method of claim 1, further comprising transferring electronic tokens from the user to a second user.

26. The method of claim 1, wherein providing products and services that may be purchased through the vendor comprises listing products and services for sale by one or more users of a Web site maintained by the vendor.

~~27~~. A server operated by a vendor that provides products for sale or rental through a network, the server comprising:

- a network interface through which the server communicates with a user over the network;
- a database;
- a memory;

a processor that executes software stored in the memory, the software including one or more programmed routines, the programmed routines comprising:

a registration routine that opens a user account in the database for the user;

an electronic token sale routine that issues one or more electronic tokens from the vendor to the user, and adds the one or more electronic tokens to the user account;

a display routine that displays the prices of the products in units of electronic tokens;

a selection routine that permits the user to select a subset of the products for purchase, a total price of the subset of the products being computed in units of electronic tokens; and

a purchase routine that determines if the user account contains electronic tokens having a value equal to or greater than the total price, and if so, subtracts the total price from the user account.

Abstract of the Disclosure

Methods and apparatus for conducting electronic commerce using electronic tokens are described. The electronic tokens are issued and  
5 maintained by a vendor, who also provides products and services that can be purchased or rented using the electronic tokens. The electronic tokens may be purchased from the vendor either on-line, using a credit card, or off-line, using a check, money order,  
10 purchase order, or other payment means. Because the vendor is the issuer of the electronic tokens, there is no need for transactions to be handled by a third party, such as a bank or other organization. This reduces the overhead involved in conducting electronic  
15 commerce, and provides the vendor with a greater amount of control. Additionally, the vendor maintains total control over the price of the electronic tokens at any time. For vendors who offer software products for sale or rental, use of electronic tokens makes a variety of  
20 rental arrangements practical, including rental for short periods of time, for a specific number of uses, or for a specific number of processings.

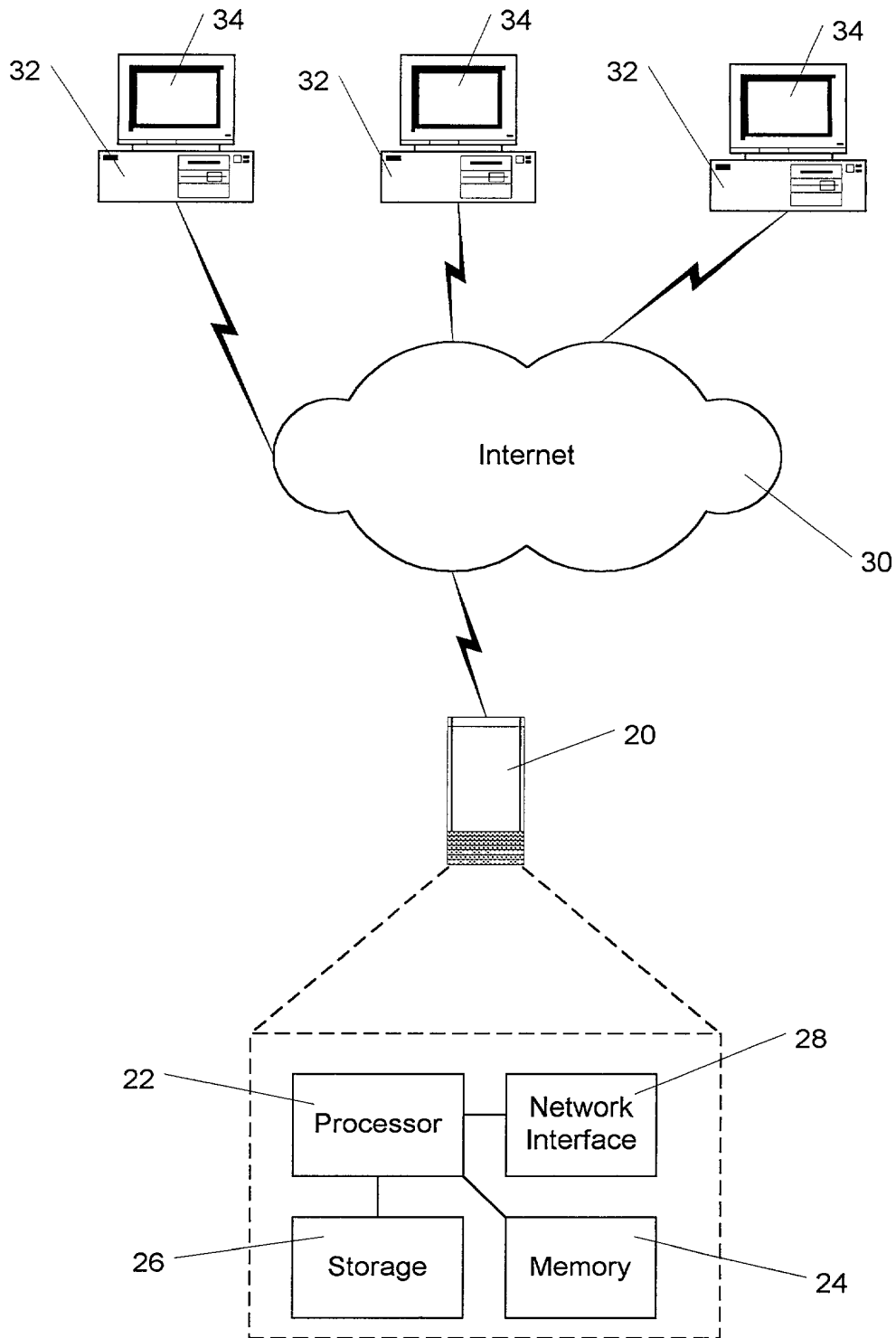


FIG. 1

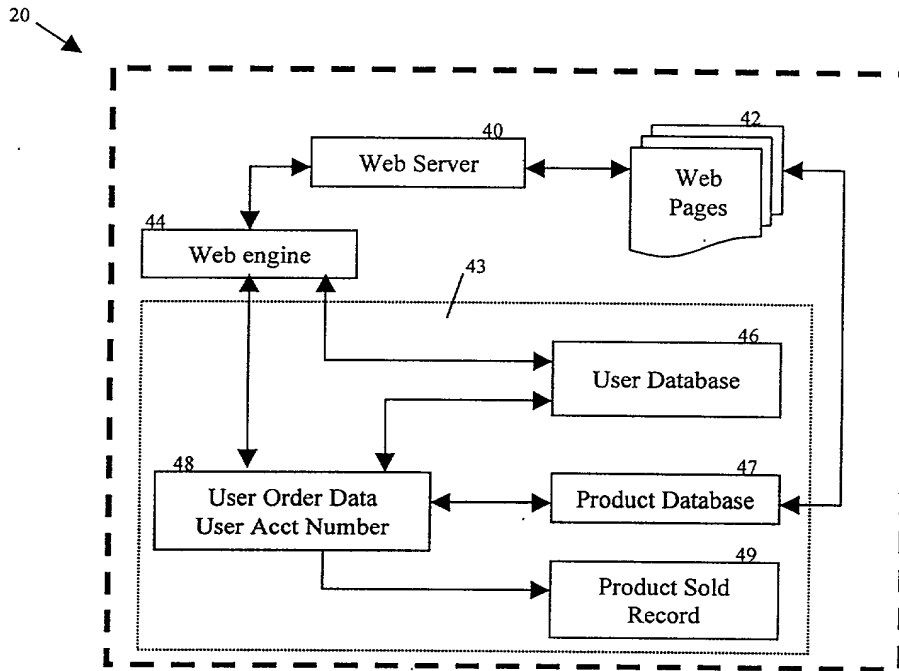
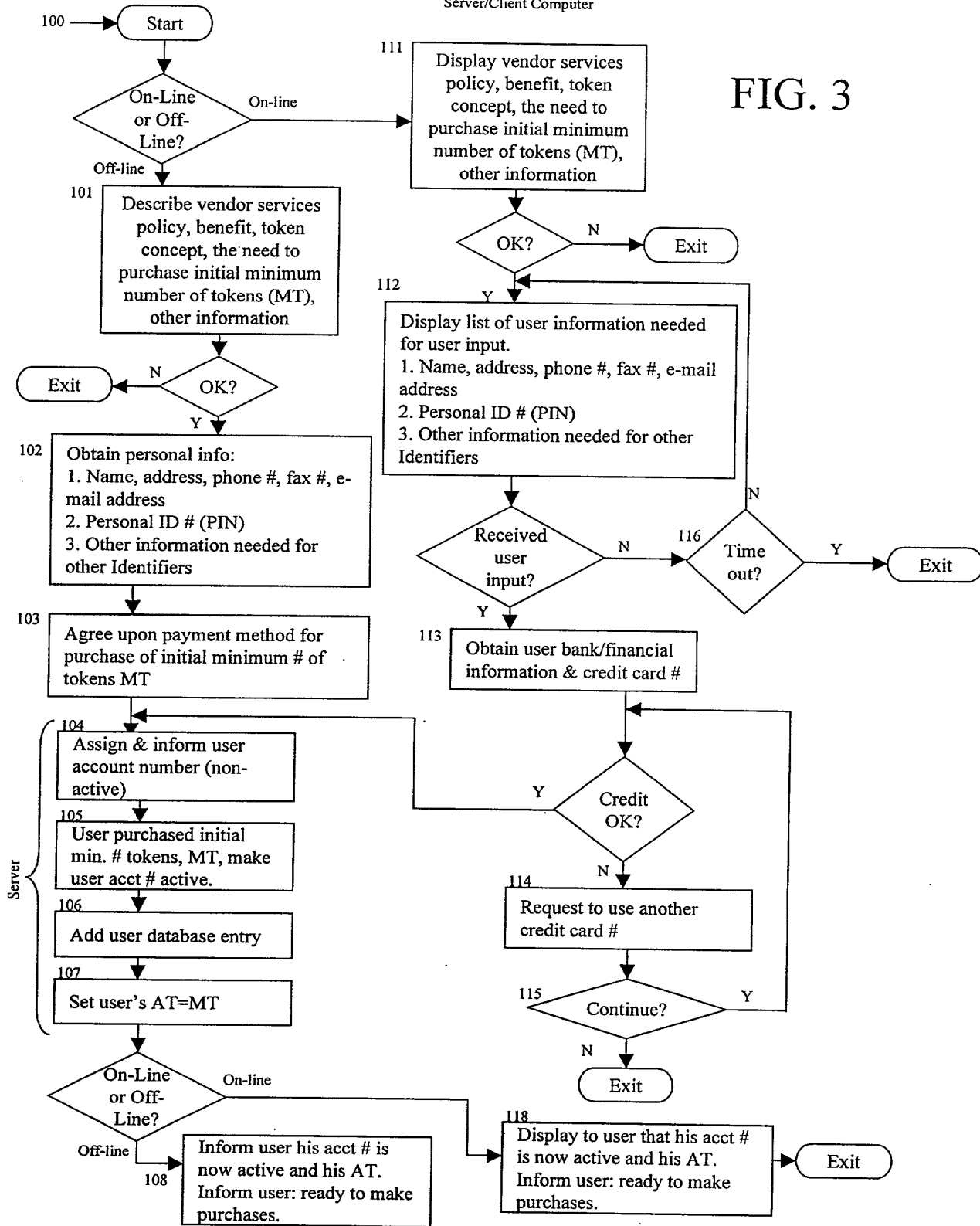


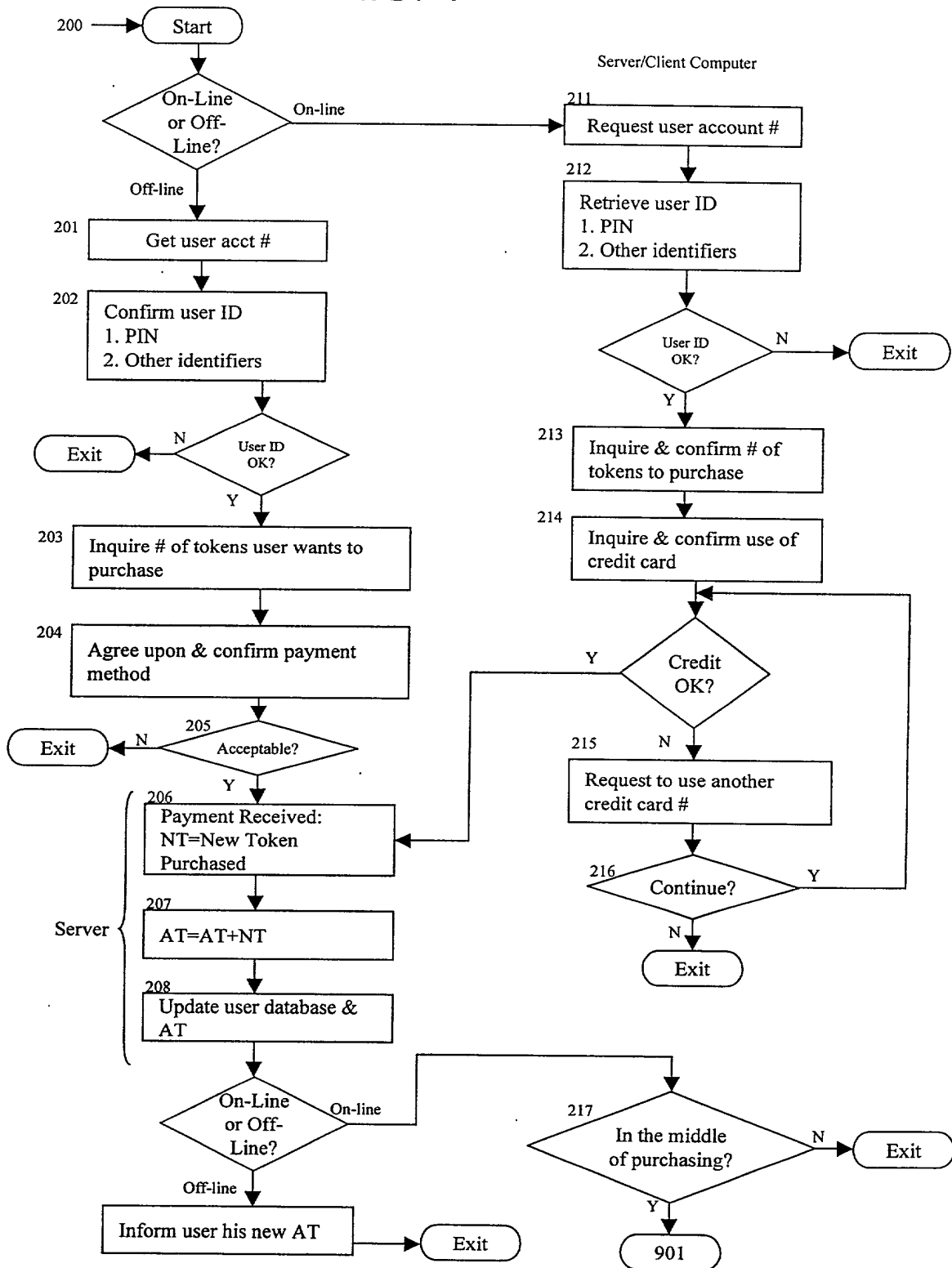
FIG. 2



FIG. 3



# FIG. 4



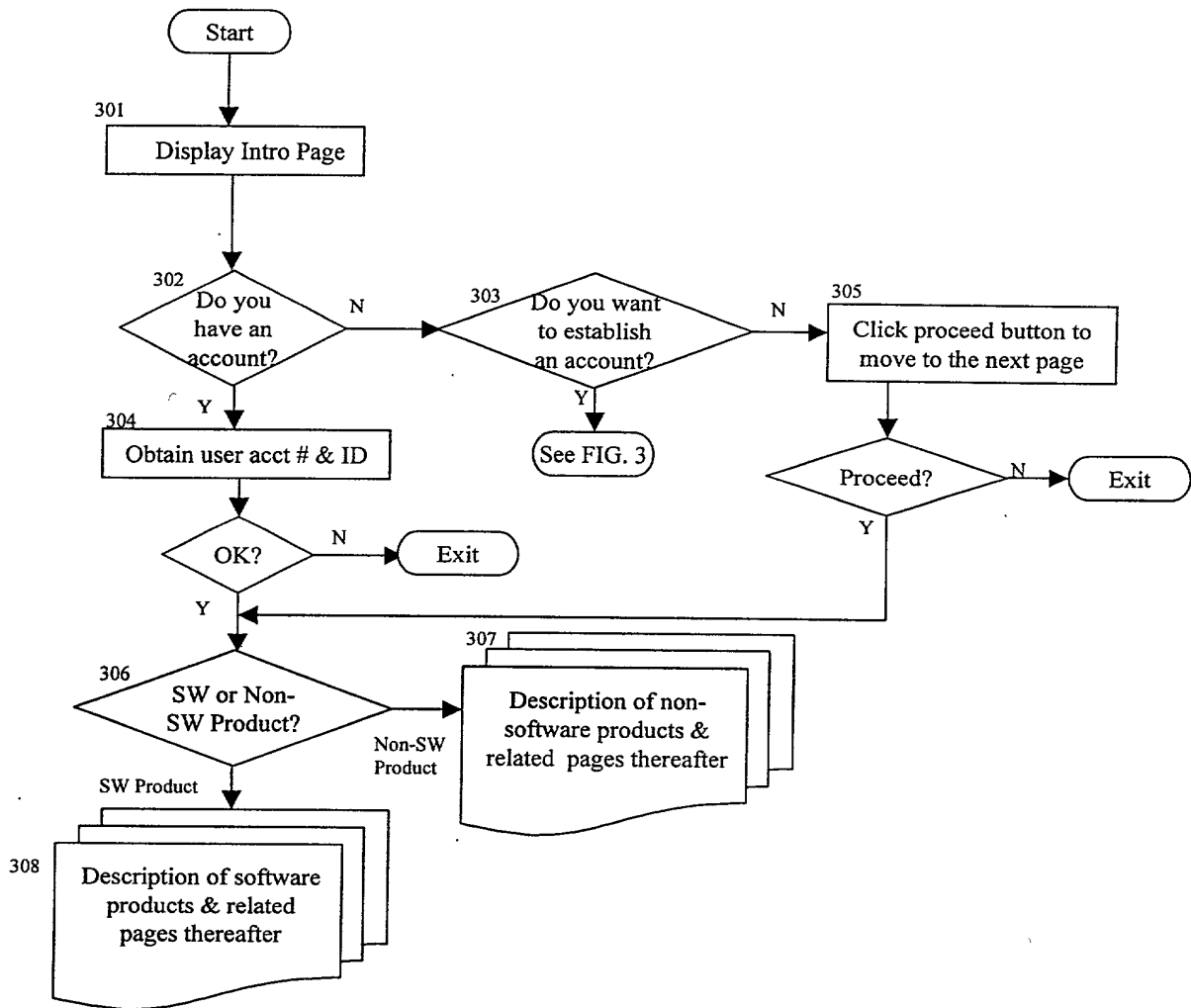


FIG. 5

501 [HOME][BACK][FORWARD][LAST]

Summary Description of Software Categories

[ ] Scanned Document Enhancement

502 → [X] Document Raster Editing

[ ] Computer Aided Design (CAD)

[ ] Engineering Document Management Systems (EDMS)

[ ] Language Translators

[ ] Computer Games

[QUIT] 504 503  
[BACK][PROCEED]

FIG. 6

601

[HOME][BACK][FORWARD][LAST]				
Summary List and Description of selected software categories, each with availability in purchase or rent				
Document	For Purchase	For Rent/ Time	For Rent/# of times of use	For Rent/ # of Processings
Raster Editing				
Software A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Software B	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Software C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Software D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
[QUIT]				
[BACK][PROCEED]				

FIG. 7

700
[HOME][BACK][FORWARD][LAST]

User selected software summary description & cost

<u>Product</u>	<u>Type of Purchase</u>	<u># of Tokens</u>
[X] Software A	Purchase	100
[X] Software D	For Rent	
	<u># Processings</u>	<u># of Tokens</u>
702 {	<input type="checkbox"/> Up to 100	10
	<input checked="" type="checkbox"/> 101 - 1,000	80
	<input type="checkbox"/> 1,001-10,000	600

Detailed Information:

☐ Yes

☐ Yes

Do you have Software D installed on your computer? ☒ Yes ☐ No

Total # of tokens required RT: 180. User AT: 500. Remaining AT if purchased: 320

705
706
707

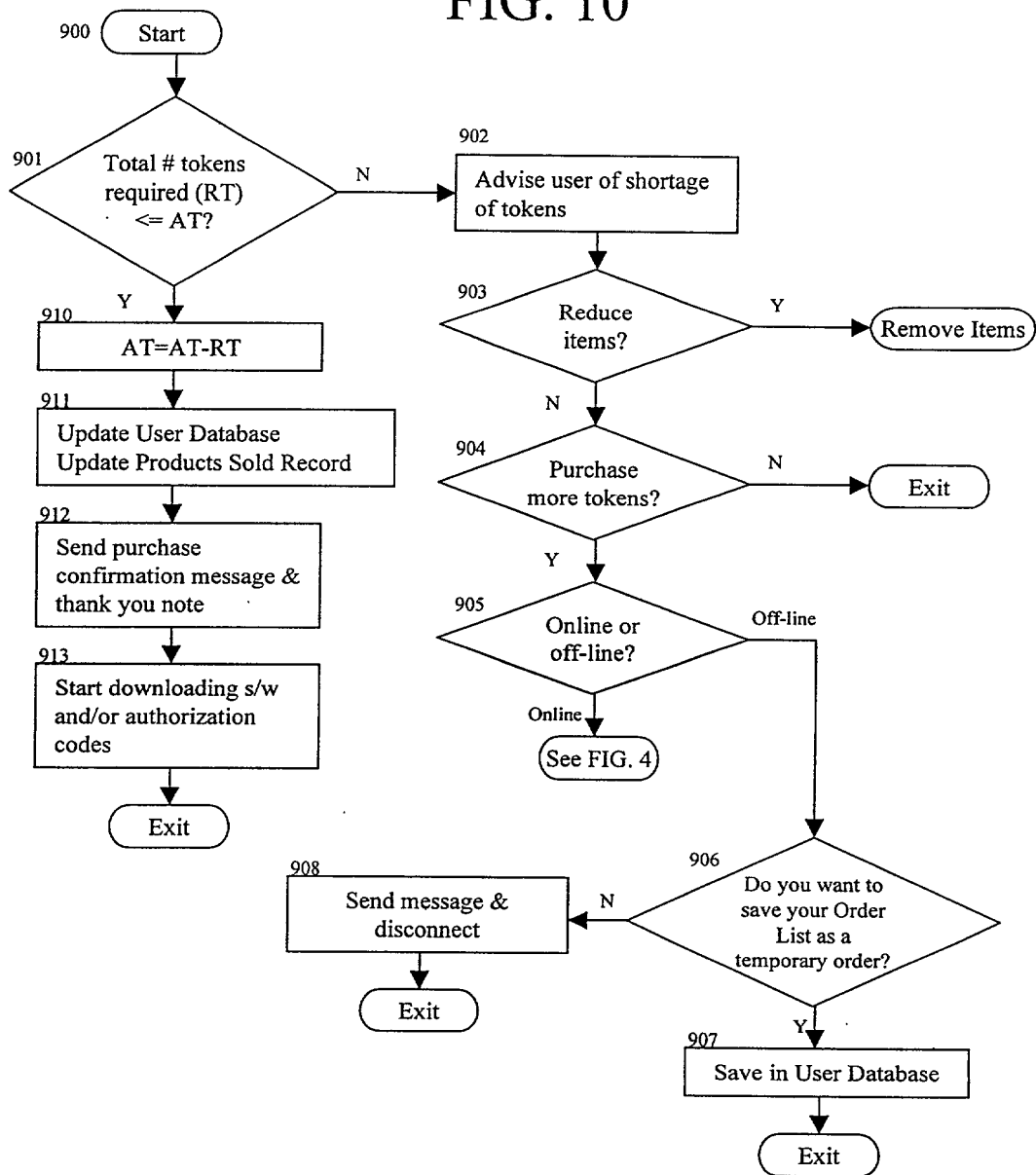
[QUIT]
[BACK][ORDER]

710
709 708

FIG. 8

FIG. 9

FIG. 10





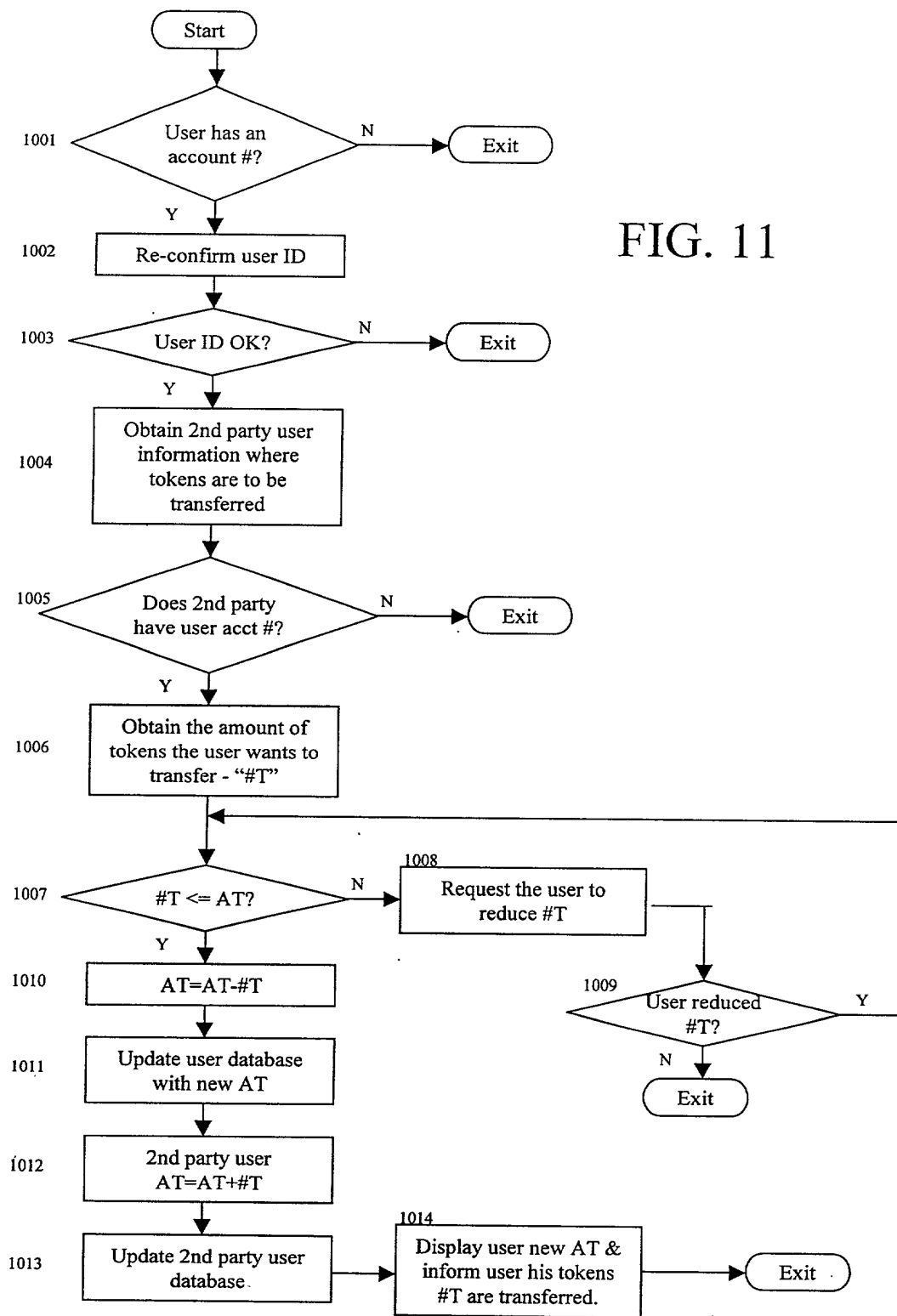
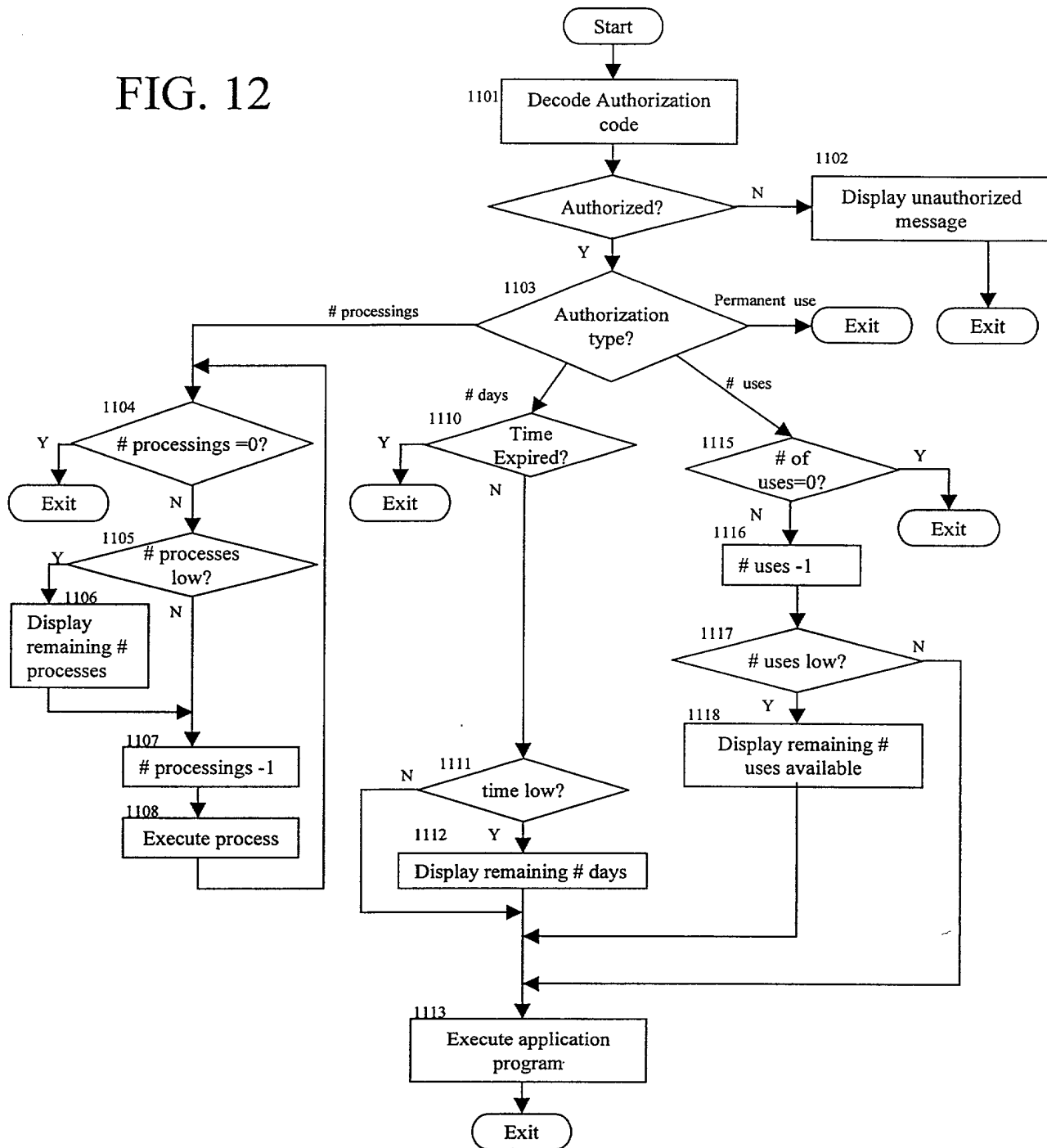


FIG. 11

FIG. 12



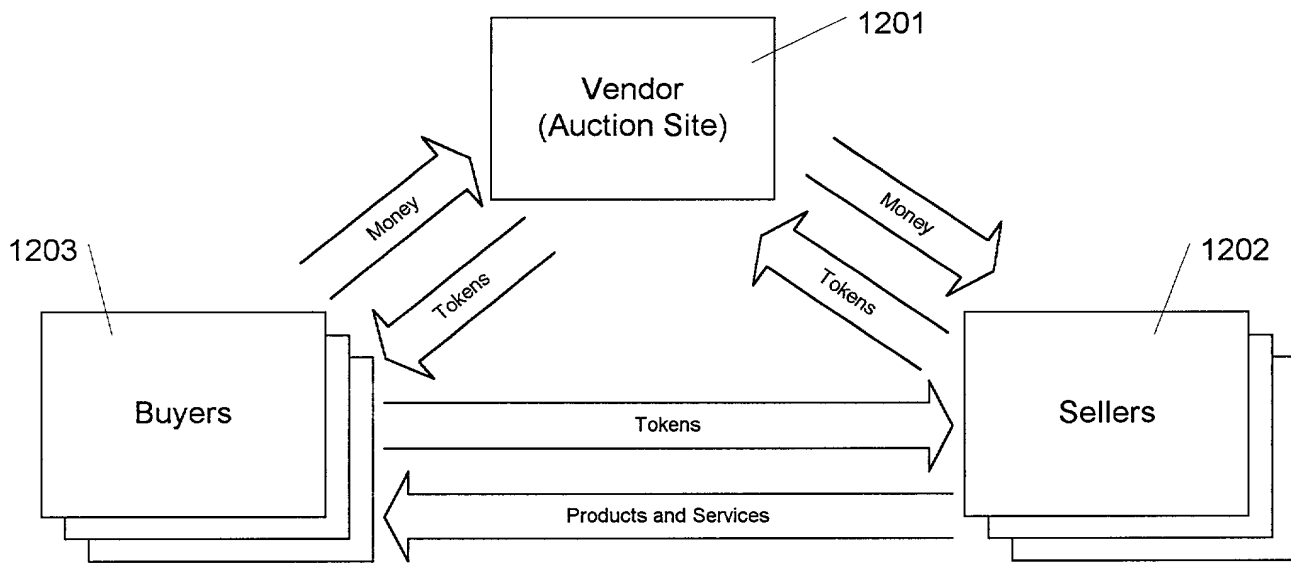


FIG. 13

GTX-001

**DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**METHOD AND APPARATUS FOR CONDUCTING ELECTRONIC  
COMMERCE TRANSACTIONS USING ELECTRONIC TOKENS**

the specification of which

(check [X] is attached hereto  
one)

[ ] was filed on \_\_\_\_\_ as  
Application Serial No. \_\_\_\_\_  
and was amended on \_\_\_\_\_  
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application.

I do not know and do not believe that the invention was in public use or on sale in the United States of America more than one year prior to this application.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate or provisional applications filed under 35 U.S.C. § 111(b) listed below and have also identified below any foreign application for patent, inventor's certificate or provisional application having a filing date before that of the application on which priority is claimed:

Prior Foreign or Provisional Application(s)

			Priority Claimed	
			[X]	[ ]
			Yes	No
<u>60/178,239</u>	<u>US</u>	<u>26/01/2000</u>		
(Number)	(Country)	(Day/Month/Year Filed)		

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

<u>Application Serial No.)</u>	<u>(Filing Date)</u>	<u>(Status) (patented, pending, abandoned)</u>
<u>(Application Serial No.)</u>	<u>(Filing Date)</u>	<u>(Status) (patented, pending, abandoned)</u>

As a named inventor, I hereby appoint the following attorneys or agents to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of inventor Marvin T. Ling

Inventor's signature *Marvin T. Ling*

April 21st, 2010

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